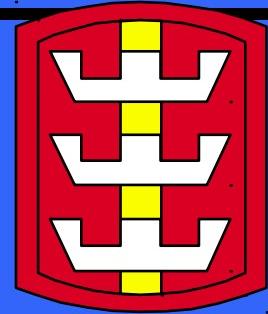




RIVER CROSSING OPERATIONS SAFETY



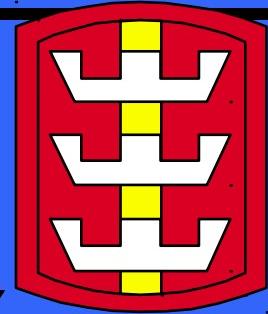
Crossing Site Commander is in control of crossing area





RIVER CROSSING OPERATIONS

STAGING AREA SAFETY

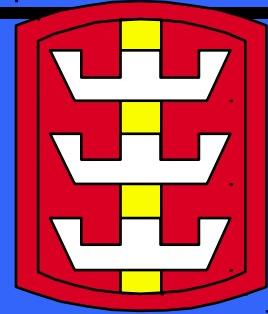


- Strict situational awareness needs to be taken on the maneuvering of large vehicles in restricted areas.
- Traffic speed on MSRs is crucial due to multiple maneuvering oversized vehicle, type of terrain and weather.
- Particular attention needs to be taken on the drainage ditch slopes on routes.
- Ground guides and traffic control



RIVER CROSSING OPERATIONS

SHORE/SLIP CREW SAFETY

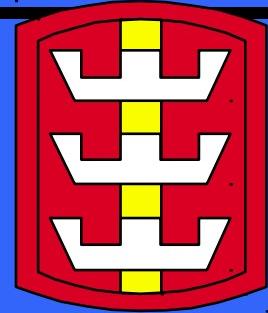


- Shore/Slip NCO is responsible for shore safety.
- Front and rear ground guides should be used when personnel permit. At least the use of front ground guide.
- Width of slip will dictate the number of vehicles on slip at one time.
- Down stream vehicle will launch load first.



RIVER CROSSING OPERATIONS

SHORE/SLIP SAFETY (CONTINUE)

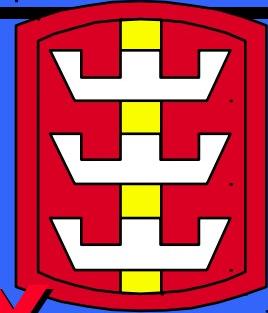


- Forward safety bay pin should be engaged and driver side aft tie-down should be engaged during transporting of bay from EEP and slip.
- Unit SOP will dictate on use of life-vest and trouser blousing for operator of vehicles on slip.
- PTO should be engage on slip and brake system should be tested prior to backing down slip.



RIVER CROSSING OPERATIONS

ASSEMBLY CREW SAFETY

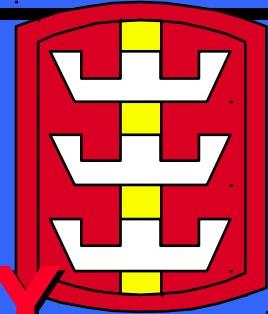


- Raft commander is responsible for assembly crew safety.
- All soldiers over water should have trousers unbloused and wearing life-vest.
- Non-swimmers will be identified with orange life-vest.
- Unit SOP will dictate the slinging of weapons or storing on boats.
- Unit SOP will dictate the use of rubber gloves in water for cold climates.



RIVER CROSSING OPERATIONS

ASSEMBLY CREW SAFETY (CONTINUE)



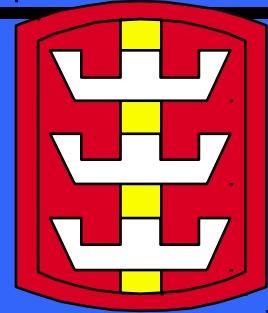
- Particular soldier/situational awareness is needed around all connecting components of bays.
- Safety briefing is issued prior to mission.





RIVER CROSSING OPERATIONS

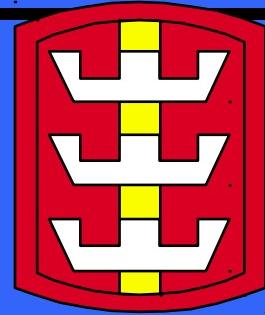
SAFETY BOAT OPERATIONS



- Safety boat operator is responsible for safety overall river safety operations.
- Safety boat should have an operator, medic and a lifeguard. Unit SOP will dictate the use of a combat life saver in lieu of a medic and a strong swimmer emplace of lifeguard at minimum.
- Lifeguard or strong swimmer should be in comfortable attire i.e.,



RIVER CROSSING OPERATIONS SAFETY BOAT OPERATIONS **(CONTINUE)**

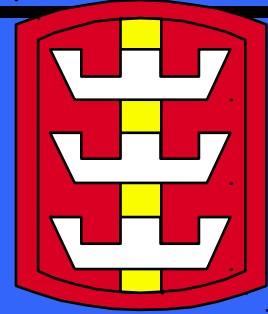


- Safety boat should be equipped with the following items: 2 paddles/oars, ring buoy with at least 50 feet of nylon rope, CLS bag, litter, wool blanket, FM radio, searchlight and PA system if needed.
- Safety boat should maintain situational awareness of water craft traffic on river.
- Safety boat is located 100 meters downstream from bridge.



RIVER CROSSING OPERATIONS

SAFETY BOAT OPERATIONS

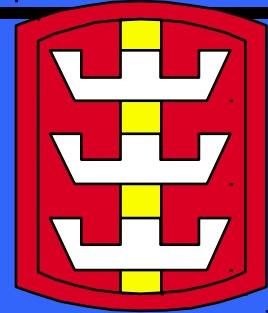


- During rafting operations the safety boat should follow loaded raft.
- Actions of a man overboard should be; safety boat reacts immediately, once at close distance engines are shut down and paddles are used. Lifeguard or strong swimmer enter water if ring buoy is not effective.
- Safety boat should be equipped



RIVER CROSSING OPERATIONS

CROSSING TRAFFIC SAFETY

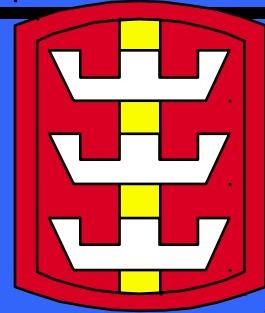


- Raft commander is over all responsible for the safety of vehicles on raft.
- Senior Bridge NCO is over all responsible for the safety of vehicles crossing bridge.
- ERP NCOIC is responsible for briefing traffic control measures and safety to crossing unit prior to leaving ERP.
- Life-vest are issued to traffic only being rafted.



RIVER CROSSING OPERATIONS

CROSSING TRAFFIC SAFETY



- Ground guides are used for rafting operations only. They are placed at the top of excess/egress, first interior bay and last interior bay.
- Vehicles should be loaded at considerable slow rate of speed without the use of breaks.
- Vehicles will be properly placed on raft (centered), and chalked. Engines will remain on and



RIVER CROSSING OPERATIONS

CROSSING TRAFFIC SAFETY

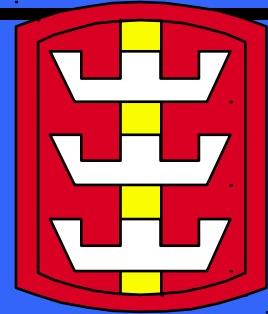


Table 9. Classification of ribbon bridges

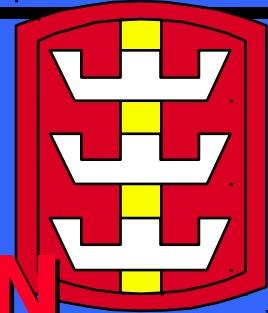
		Bridge classification based upon current velocity							
Type of crossing		0-3 fps	4 fps	5 fps	6 fps	7 fps	8 fps	9 fps	10 fps
Normal	Wheel Track	96 75	96 75	96 70	96 70	82 70	65 60	45 45	30 30
Caution	Wheel Track	105 85	105 85	100 80	100 80	96 80	75 65	50 50	35 35
Risk	Wheel Track	110 100	110 95	105 90	105 90	100 90	82 75	65 65	40 40

Notes.

1. For a normal crossing—
 - The maximum safe speeds are:
Class 0 to 40—15 mph on ramps and 25 mph on bridge.
Over Class 40—5 mph on ramps and 15 mph on bridge.
 - Vehicle spacing is a minimum of 100 ft (front to back)
 - No sudden stopping or accelerating on the bridge
2. For a caution crossing—
 - The maximum safe speed is 8 mph on ramps and bridge
3. For a risk crossing—
 - The maximum safe speed is 3 mph on ramps and bridge
 - Only one vehicle is allowed on bridge at a time
 - Vehicle must be centered on the centerline of the bridge
 - No stopping, accelerating, or shifting gears on bridge
 - A ground guide must be provided for each vehicle



RIVER CROSSING OPERATIONS

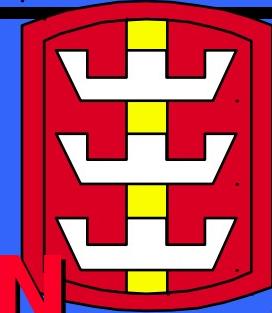


EXCEPTIONAL OPERATION SAFETY

- Cold weather considerations;
 - Rubber boats should not be used on the raft or bridge due to lack of traction.
 - Keeping soldiers hydrated during cold weather is just as important as hot weather.
 - Rubber gloves are preferred on assembly crew to prevent frostbite to hands during raft construction.



RIVER CROSSING OPERATIONS

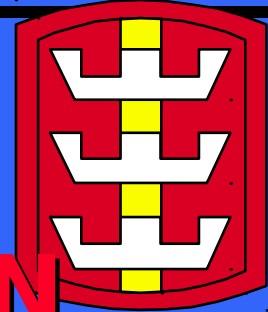


EXCEPTIONAL OPERATION SAFETY

- Cold weather considerations (continue);
 - Vehicles should be operated at a reduced speed and with minimum use of brakes to reduce the risk of sliding.
- Hot weather considerations;
 - Work cycles and soldier hydrations need to be strictly monitored.



RIVER CROSSING OPERATIONS



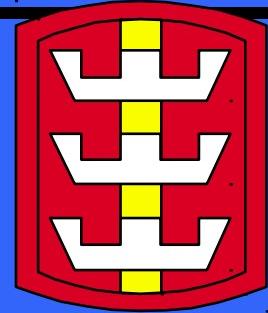
EXCEPTIONAL OPERATION SAFETY

- **Sever weather considerations;**
 - Reduced speed should be implemented to reduce sliding on excess and egress routes.
 - Special considerations need to be taken during electrical storms;
 - Soldiers should remove weapons and store in a local secure area.
 - **If at all possible minimizes the use**



RIVER CROSSING OPERATIONS

AIRLIFT OPERATION SAFETY

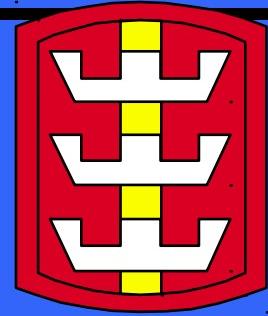


- An qualified Pathfinder, Ranger or Airassualt is necessary and responsible for the safety of the PZ and LZ.
- Soldiers conducting operation should remove any loose gear and tuck BDU shirt into BDU pants.
- Dog tags should be the only metal worn.
- Safety briefing should be issued by OIC prior to mission



RIVER CROSSING OPERATIONS

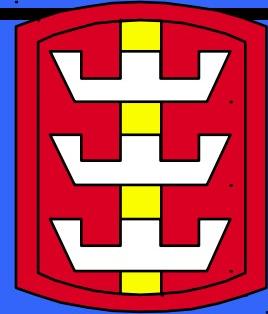
AIRLIFT OPERATION SAFETY





RIVER CROSSING OPERATIONS

AIRLIFT OPERATION



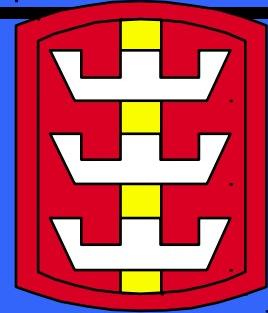
SAFETY

- Safety equipment should consist of the following:

- Safety goggles to be worn by all soldiers at PZ.
- Kevlar must be worn by all soldiers.
- Road guard vest worn by signalman for visual recognition.
- Static probe used to discharge static electricity from aircraft.



RIVER CROSSING OPERATIONS SAFETY REFERENCES



AR 385-13 Water Safety

FM 90-13 River Crossing Operations

**TC 5-210 Military Float Bridging
Equipment**

POC: SFC STEWART

V CORPS CHIEF BRIDGE NCO

DSN: 370-5576